## **AMENDMENT TO THE CLAIMS**

1. (Previously Presented) An apparatus for converting a pitch delay using linear prediction in speech transcoding, the apparatus comprising:

a linear interpolating portion, which linearly interpolates a closed-loop pitch delay decoded by a selected mode vocoder (SMV) speech decoder to make the closed-loop pitch delay fit in a search section for open-loop pitch delays of G.723.1 speech encoder, to thereby obtain a changed closed-loop pitch delay of the SMV decoder;

a predicted value calculating portion, which calculates a predicted pitch delay using linear prediction, based on past closed-loop pitch delays of the G.723.1 speech encoder;

a difference calculating portion, which calculates a difference between the changed closed-loop pitch delay of the SMV speech decoder and the calculated predicted pitch delay;

a comparing portion, which compares the calculated difference with a predetermined threshold value and outputs the result of the comparison;

a pitch delay determining portion, which, when the calculated difference is less than the predetermined threshold value, determines the changed closed-loop pitch delay of the SMV speech decoder to be an open-loop pitch delay of the G.723.1 speech encoder; and

a pitch delay detecting portion, which detects a closed-loop pitch delay of the G.723.1 speech encoder based on the determined open-loop pitch delay of the G.723.1 speech encoder.

- 2. (Original) The apparatus of claim 1, wherein the linear interpolating portion extracts two pitch delays of the SMV decoder every 30 ms, which corresponds to a frame of the G.723.1 speech encoder, and linearly interpolates the extracted pitch delays of the SMV decoder to obtain the changed closed-loop pitch delay of the SMV speech decoder.
- 3. (Currently Amended) The apparatus of claim 1, wherein when the calculated difference is equal to or more than the predetermined threshold value, the pitch delay determining portion determines the closed-loop pitch delay of the G.723.1 speech encoder that is obtained using a conventional method of detecting a open loop pitch delay of the G.723.1 speech encoder to be the open-loop pitch delay of the G.723.1 speech encoder.

2013P154 2 10/749,779

- 4. (Previously Presented) A method for converting a pitch delay using linear prediction in speech transcoding, the method comprising:
- (a) linearly interpolating a closed-loop pitch delay decoded by a selected mode vocoder (SMV) speech decoder to make the closed-loop pitch delay fit in a search section for open-loop pitch delays of G723.1 speech encoder, and obtaining a changed closed-loop pitch delay of the SMV speech decoder
- (b) calculating a predicted pitch delay using linear prediction, based on past closed-loop pitch delays of the G.723.1 speech encoder
- (c) calculating a difference between the changed closed-loop pitch delay of the SMV decoder and the calculated predicted pitch delay;
- (d) comparing the calculated difference with a predetermined threshold value and outputting the result of the comparison;
- (e) determining the changed closed-loop pitch delay of the SMV speech decoder to be an open-loop pitch delay of the G.723.1 speech encoder when the calculated difference is less than the predetermined threshold value; and
- (f) detecting a closed-loop pitch delay of the G.723.1 speech encoder based on the determined closed-loop pitch delay of the G.723.1 speech encoder.
  - 5. (Original) The method of claim 4, wherein step (a) comprises
- (a1) extracting two pitch delays of the SMV decoder every 30 ms, which corresponds to a frame of the G.723.1 speech encoder;
- (a2) linearly interpolating the extracted pitch delays of the SMV decoder to obtain the changed closed-loop pitch delay of the SMV speech decoder.
- 6. (Currently Amended) The method of claim 4, wherein in step (e), when the calculated difference is equal to or more than the predetermined threshold value, the closed-loop pitch delay of the G.723.1 speech encoder-that is obtained using the conventional method is determined to be the open-loop pitch delay of the G.723.1 speech encoder.